Drinking Water Surveillance Program

HAMILTON WATER SUPPLY SYSTEM

Annual Report 1989

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HAMILTON
WATER SUPPLY SYSTEM

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1989

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

HAMILTON WATER SUPPLY SYSTEM
1989 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored.

The Hamilton Water Treatment Plant is a conventional treatment plant which treats water from Lake Ontario. The process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. This plant has a design capacity of 909 x 1000 m^3/day and serves a population of approximately 412,000.

Water samples from the raw, treated and two distribution sites were taken on a monthly basis and analyzed for the presence of approximately 180 parameters, during 1989. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organics (Chloroaromatics, Chlorophenols, Pesticides and PCB, Phenolics, Polyaromatic Hydrocarbons, Specific Pesticides and Volatiles). Samples were analyzed for Specific Pesticides and Chlorophenols in June and November only.

A summary of results is shown in Table A.

Inorganic and Physical parameters (Laboratory Chemistry, Field Chemistry and Metals) were below applicable health related Ontario Drinking Water Objectives (ODWOs).

Samples were analyzed monthly for the presence of approximately 110 Organics. Levels did not exceed health related guidelines.

During 1989, the DWSP sampling results indicated that the Hamilton Water Supply System produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE A

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS

SUMMARY TABLE BY SCAN

SCAN	RAW			TREATED			SITE 1			SITE 2		
	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE	TESTS	POSITIVE	%POSITIVE
BACTERIOLOGICAL	36	25	69	33	1	3	33	4	12	36	2	5
CHEMISTRY (FLD)	37	34	91	58	52	89	103	90	87	83	75	90
CHEMISTRY (LAB)	244	206	84	223	168	75	407	355	87	443	393	88
METALS	288	162	56	264	132	50	517	304	58	564	321	56
CHLOROAROMATICS	168	0	0	154	0	0	154	0	0	168	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.	.	.	.
PAH	192	0	0	175	0	0	.	.	.	.	.	.
PESTICIDES & PCB	408	0	0	374	0	0	309	0	0	343	0	0
PHENOLICS	12	7	58	11	8	72	.	.	.	.	.	.
SPECIFIC PESTICIDES	65	0	0	64	0	0	11	0	0	12	0	0
VOLATILES	348	1	0	290	41	14	319	44	13	319	44	13
TOTAL	1810	435		1658	402		1853	797		1968	835	

NO KNOWN HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

HAMILTON WATER SUPPLY SYSTEM
1989 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored.

The DWSP program was initiated at the Hamilton Water Treatment Plant in the spring of 1986. Annual reports were published for 1986 (ISBN 0-7729-2554-2), 1987 and 1988 (ISSN 0839-9034).

This report contains information and results for 1989.

In order to accommodate the increasing number of plants on the DWSP and to facilitate the timely completion of the 1989 annual reports, plants with two or more years of published data will receive an abbreviated annual report. This report maintains the same general format as in previous years but does not include a comprehensive discussion of results. For more detail on the parameters analyzed and discussion of results, consult the 1987 and 1988 reports.

PLANT DESCRIPTION

The Hamilton Water Treatment Plant is a conventional treatment plant which treats water from Lake Ontario. The process consists of coagulation, flocculation, sedimentation, filtration, disinfection and fluoridation. The plant is divided into two independent treatment modules: ammoniation is infrequently used to produce a long-lasting chloramine residual in the distribution system and sulphur dioxide is used as a dechlorinator as necessary.

This plant has a design capacity of 909 x 1000 m^3/day and flows on the day of sampling ranging from 110.3 x 1000 m^3/day to 563.6 x 1000 m^3/day. The plant serves a population of 412,000.

The plant location is shown in Figure 1. Plant Process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

SAMPLING AND ANALYSIS

Plant operating personnel analyze for process control parameters (Table 1).

Water at the Hamilton Water Treatment Plant and two sites in the

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

HAMILTON WATER TREATMENT PLANT

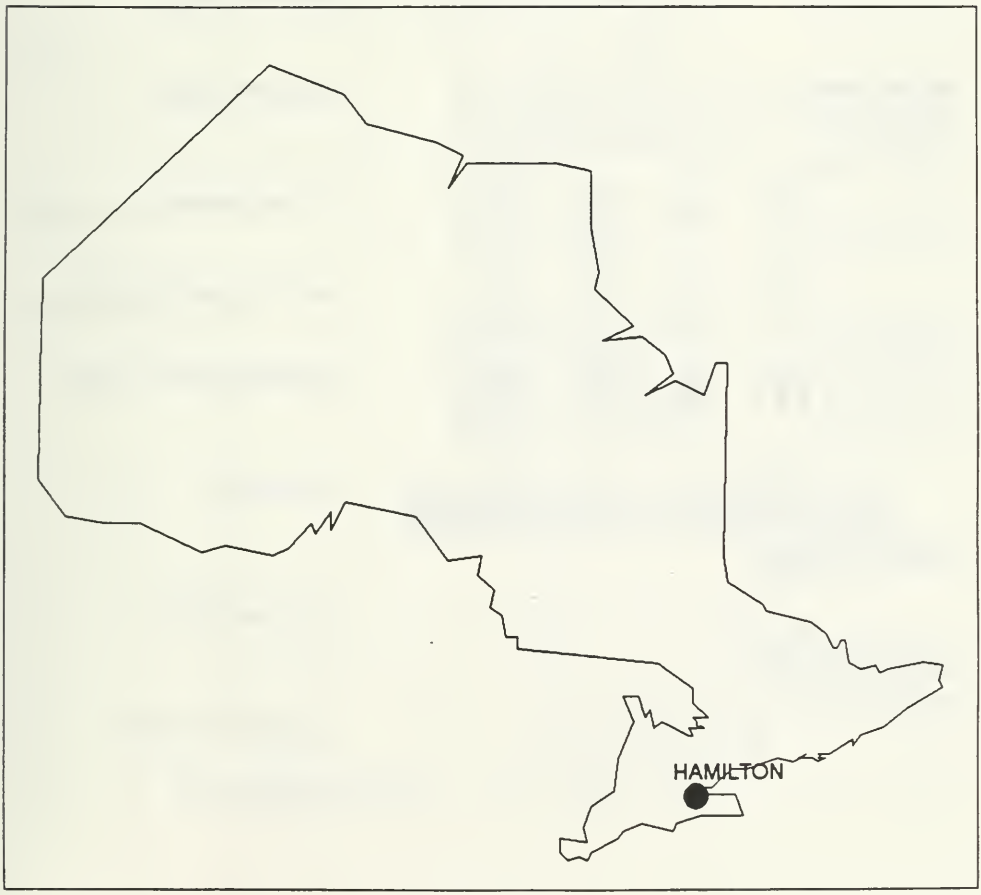

FIGURE 2

HAMILTON WTP

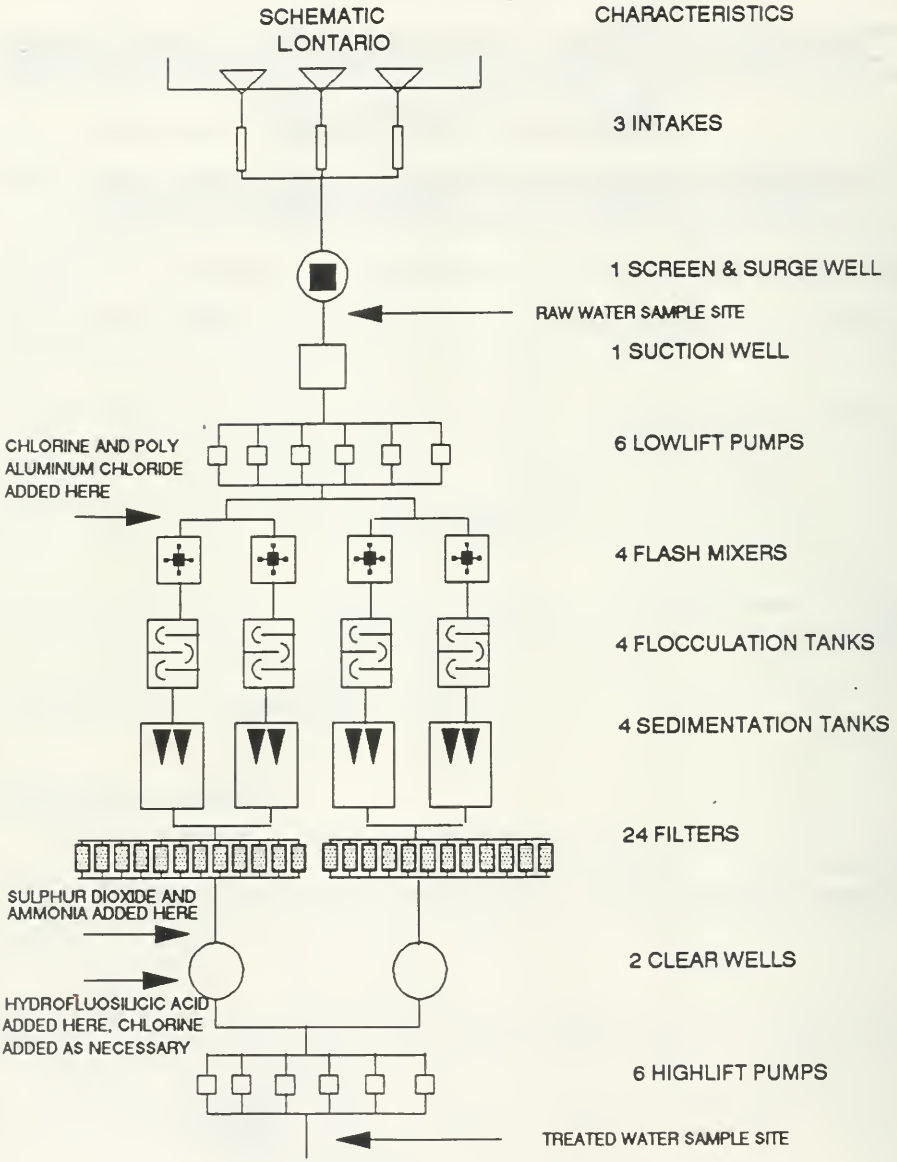

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

IN-PLANT MONITORING HAMILTON WSS 1989

PARAMETER	LOCATION	FREQUENCY
Chlorine residual-free	Lowlift discharge	continuous
	Settled water	continuous
	Filtered water	continuous
	Highlift discharge	every 2 hrs
total	Highlift discharge	every 2 hrs
pH	Raw water intake	continuous
	Raw water wet well	every 2 hrs
	Treated water	continuous
	Highlift discharge	every 2 hrs
Temperature	Raw water wet well	continuous
	Treated water	every 2 hrs
Turbidity	Raw intake line	every 2 hrs
	Raw water wet well	continuous
	Top of filters	continuous
	Bottom of filters	continuous
	Highlift discharge	every 2 hrs
	Highlift discharge	continuous

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

HAMILTON WATER SUPPLY SYSTEM

LOCATION:	900 WOODWARD AVE HAMILTON, ONTARIO L8H 7N2 (416-526-4484)
SOURCE:	RAW WATER SOURCE - LAKE ONTARIO
RATED CAPACITY:	909 (1000 M^3/DAY)
OPERATION:	MUNICIPAL
PLANT SUPERINTENDENT:	W. FURRY
MINISTRY REGION:	WEST CENTRAL
DISTRICT OFFICER:	MR. J.W. VOGT

MUNICIPALITY SERVED	POPULATION
ANCASTER	16,542
DUNDAS TOWN	20,081
HAMILTON	307,690
STONEY CREEK	41,690
WATERDOWN	25,541

distribution system was sampled for the presence of approximately 180 parameters on a monthly basis. Samples were analyzed for Specific Pesticides and Chlorophenols in June and November only. Only the raw and treated water at the plant was analyzed for Polyaromatic Hydrocarbons and Phenolics . As of August 1989, the analysis of Triazine pesticides was dropped from the distribution sample. Laboratory analysis was conducted at the Ministry of the Environment facilities in Rexdale, Ontario.

RESULTS

Field Chemistry measurements were recorded on the day of sampling and were entered on the DWSP database as submitted by plant personnel.

Table 3 contains information on the sample day retention time, flow rate and treatment chemicals used and their associated dosages.

Table 4 is a summary break-down of the number of water samples analyzed by parameter and by water type. The number of times that a positive or trace result was detected is also reported. Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be

confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analyzed in the DWSP.

Associated guidelines and detection limits are also supplied on tables 5 and 6. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters. These are currently under review. When an ODWO is not available, guidelines/limits from other agencies are consulted. The Parameter Listing System (PALIS), recently published (ISBN 0-7729-4461-X) by the MOE, catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Many of the compounds detected are naturally occurring or are treatment by-products.

IN THIS REPORT, DISCUSSION IS LIMITED TO THE TREATED AND DISTRIBUTED WATER AND ADDRESSES ONLY THOSE PARAMETERS WITH CONCENTRATIONS ABOVE GUIDELINE VALUES AND ORGANICS WITH DETECTED POSITIVE RESULTS.

Results for the treated and distributed water indicate that the health related guideline for chromium was exceeded in one sample.

Inorganic and Physical Parameters

Ammonia

The Total Ammonium levels are high. While the European Economic Community has an aesthetic guideline of .05 mg/L, the Maximum Admissible Concentration is .50 mg/L and is set as a result of the concern for potential sewage pollution and its detection.

Fluoride

The Laboratory results indicate that fluoride levels were below the ODWO recommended range of 1.0 to 1.4 mg/L in ten treated and distribution system samples. Fluoride was not added to the treatment process during the December sampling period.

Hardness

The ODWOs indicate that a hardness level of between 80 and 100 mg/L as calcium carbonate for domestic waters, provides an acceptable

balance between corrosion and encrustation. Water supplies with a hardness greater than 200 mg/L are considered poor and would possess a tendency to form scale deposits and result in excessive soap consumption.

Aluminum

The plant operational guideline of 100 µg/L as Al in water leaving the plant was exceeded in 16 treated water and distribution system samples.

Chromium

The ODWO of 50 µg/L was exceeded in the March treated water sample. Elevated levels were also reported for the raw water in February and March but were not detected in the corresponding samples taken from the distribution system. Plant staff were notified.

Organic Parameters

1,1,1-Trichloroethane

1,1,1-Trichloroethane was detected in the February treated water sample at 0.36 µg/L. The United States Environmental Protection Agency (EPA) has a Maximum Contaminant Level (MCL) of 200 µg/L.

Trihalomethanes

Trihalomethanes (THMs) are acknowledged to be produced during the water treatment process and will always occur in chlorinated

surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as well as for total THMs. All Total THM occurrences in the treated and distributed samples, ranging from 15.2 to 34.8 µg/L, were well below the ODWO of 350 µg/L.

CONCLUSIONS

Results listed in this report for 1989 are consistent with the results reported for previous years. The treated water was of good quality and this was maintained in the distribution system.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS SAMPLE DAY CONDITIONS FOR 1989

SAMPLE DAY CONDITIONS			TREATMENT CHEMICAL DOSAGES (MG/L)					
			PRE-CHLORINATION	COAGULATION		CHLORAMINATION		POST-CHLORINATION
DATE	DELAY * TIME(HRS)	FLOW (1000M3)	CHLORINE	ALUM LIQUID	POLYALUMINUM CHLORIDE	AMMONIUM ANHYDROUS	AMMONIUM HYDROXIDE	CHLORINE
JAN 24	3.0	110.3	1.80	2.20	.56	.	.	.05
FEB 28	3.1	168.5	1.80	3.40	.65	.	.	.19
MAR 29	5.7	263.9	2.30	5.10	1.10	.	.	.
APR 25	6.0	207.6	2.20	5.00	.	.	.	.16
MAY 24	.	.	2.70	5.00	.	.	.	.35
JUN 28	5.0	234.7	2.20	4.00	1.00	.	.	.23
JUL 25	2.9	590.8	2.50	7.00	.	.	.	.44
AUG 29	3.2	545.4	2.90	6.00	.	.	.	.
SEP 26	2.5	270.0	2.70	5.00	.	.	.	.17
OCT 24	4.5	135.0	2.80	8.20	1.70	.	.30	.
NOV 29	3.6	145.8	2.00	5.30	1.40	.34	.	.03
DEC 20	3.1	563.6	1.80	5.00	1.20	.30	.	.

* THE DELAY TIME BETWEEN THE RAW AND TREATED WATER SAMPLING, SHOULD ESTIMATE THE RETENTION TIME

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	FECAL COLIFORM MF	12	5	0	.	.	.	.	.	.	.	.	.
	STANDRD PLATE CNT MF	.	.	.	11	0	0	11	3	0	12	1	0
	TOTAL COLIFORM MF	12	9	0	11	1	0	11	0	0	12	0	0
	T COLIFORM BCKGRD MF	12	11	0	11	0	0	11	1	0	12	1	0
*TOTAL SCAN BACTERIOLOGICAL		36	25	0	33	1	0	33	4	0	36	2	0
*TOTAL GROUP BACTERIOLOGICAL		36	25	0	33	1	0	33	4	0	36	2	0
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	1	0	0	11	11	0	22	22	0	17	15	0
	FLD CHLORINE FREE	1	0	0	6	0	0	16	3	0	7	3	0
	FLD CHLORINE (TOTAL)	1	0	0	10	10	0	22	22	0	17	15	0
	FLD PH	10	10	0	9	9	0	21	21	0	22	22	0
	FLD TEMPERATURE	12	12	0	11	11	0	22	22	0	20	20	0
	FLD TURBIDITY	12	12	0	11	11	0	.	.	.	.	.	.
*TOTAL SCAN CHEMISTRY (FLD)		37	34	0	58	52	0	103	90	0	83	75	0
CHEMISTRY (LAB)	ALKALINITY	11	11	0	10	10	0	22	22	0	24	24	0
	CALCIUM	12	12	0	11	11	0	22	22	0	24	24	0
	CYANIDE	12	0	0	11	0	0	11	0	0	11	0	0
	CHLORIDE	12	12	0	11	11	0	22	22	0	24	24	0
	COLOUR	11	4	7	10	0	10	22	0	22	24	0	23
	CONDUCTIVITY	11	11	0	10	10	0	22	22	0	24	24	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHEMISTRY (LAB)	FLUORIDE	12	12	0	11	11	0	22	22	0	24	24	0
	HARDNESS	12	12	0	11	11	0	22	22	0	24	24	0
	IONCAL	12	11	0	11	10	0	22	22	0	24	24	0
	LANGELIERS INDEX	11	11	0	10	10	0	22	22	0	24	24	0
	MAGNESIUM	12	12	0	11	11	0	22	22	0	24	24	0
	SODIUM	12	12	0	11	11	0	22	22	0	24	24	0
	AMMONIUM TOTAL	12	9	2	11	11	0	22	22	0	24	23	0
	NITRITE	12	7	5	11	0	9	22	7	15	24	17	7
	TOTAL NITRATES	11	11	0	10	10	0	22	22	0	24	24	0
	NITROGEN TOT KJELD	12	12	0	11	11	0	22	22	0	24	24	0
	PH	11	11	0	10	10	0	22	22	0	24	24	0
	PHOSPHORUS FIL REACT	12	2	3	11	0	5	.	.	.	.	.	.
	PHOSPHORUS TOTAL	12	12	0	11	1	9	.	.	.	.	.	.
	SULPHATE	11	11	0	10	10	0	22	22	0	24	24	0
	TURBIDITY	11	11	0	10	9	1	22	18	4	24	17	7
*TOTAL SCAN CHEMISTRY (LAB)		244	206	17	223	168	34	407	355	41	443	393	37
METALS	SILVER	12	0	2	11	0	6	22	0	9	24	0	13
	ALUMINUM	12	12	0	11	11	0	22	22	0	24	24	0
	ARSENIC	12	5	7	11	5	5	22	11	10	24	12	10
	BARIUM	12	12	0	11	11	0	22	22	0	24	24	0
	BORON	12	12	0	11	11	0	22	22	0	24	24	0
	BERYLLIUM	12	0	4	11	0	2	22	0	8	24	0	10

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
METALS	CADMIUM	12	0	4	11	0	3	22	0	7	24	1	10
	COBALT	12	0	10	11	0	9	22	0	15	24	0	20
	CHROMIUM	12	8	3	11	8	3	22	16	4	24	17	6
	COPPER	12	11	1	11	6	5	22	21	1	24	24	0
	IRON	12	2	9	11	0	6	22	8	14	24	0	15
	MERCURY	12	2	2	11	3	2	11	6	2	12	3	2
	MANGANESE	12	12	0	11	7	3	22	22	0	24	21	2
	MOLYBDENUM	12	12	0	11	11	0	22	22	0	24	24	0
	NICKEL	12	3	9	11	2	9	22	4	16	24	4	18
	LEAD	12	11	1	11	3	6	22	22	0	24	23	1
	ANTIMONY	12	11	1	11	11	0	22	21	1	24	23	1
	SELENIUM	12	0	5	11	0	9	22	1	17	24	3	17
	STRONTIUM	12	12	0	11	11	0	22	22	0	24	24	0
	TITANIUM	12	11	1	11	10	1	22	19	3	24	20	4
	THALLIUM	12	0	5	11	0	2	22	0	4	24	0	5
	URANIUM	12	11	1	11	10	1	22	20	2	24	22	2
	VANADIUM	12	3	9	11	4	7	22	2	20	24	4	20
	ZINC	12	12	0	11	8	3	22	21	1	24	24	0
*TOTAL SCAN METALS		288	162	74	264	132	82	517	304	134	564	321	156
*TOTAL GROUP INORGANIC & PHYSICAL		569	402	91	545	352	116	1027	749	175	1090	789	193
CHLOROAROMATICS	HEXACHLOROBUTADIENE	12	0	0	11	0	0	11	0	0	12	0	0
	123 TRICHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHLOROAROMATICS	1234 T-CHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	1235 T-CHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	124 TRICHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	1245 T-CHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	135 TRICHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	HCB	12	0	0	11	0	0	11	0	0	12	0	0
	HEXACHLOROETHANE	12	0	0	11	0	0	11	0	0	12	0	0
	OCTACHLOROSTYRENE	12	0	0	11	0	0	11	0	0	12	0	0
	PENTACHLOROBENZENE	12	0	0	11	0	0	11	0	0	12	0	0
	236 TRICHLOROTOLUENE	12	0	0	11	0	0	11	0	0	12	0	0
	245 TRICHLOROTOLUENE	12	0	0	11	0	0	11	0	0	12	0	0
	26A TRICHLOROTOLUENE	12	0	0	11	0	0	11	0	0	12	0	0
*TOTAL SCAN CHLOROAROMATICS		168	0	0	154	0	0	154	0	0	168	0	0
CHLOROPHENOLS	234 TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	245-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	246-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
	PENTACHLOROPHENOL	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
PAH	PHENANTHRENE	12	0	0	11	0	0	.	.	.	.	.	.
	ANTHRACENE	12	0	0	11	0	0	.	.	.	.	.	.
	FLUORANTHENE	12	0	0	11	0	0	.	.	.	.	.	.
	PYRENE	12	0	0	11	0	0	.	.	.	.	.	.
	BENZO(A)ANTHRACENE	12	0	0	11	0	0	.	.	.	.	.	.
	CHRYSENE	12	0	0	11	0	0	.	.	.	.	.	.
	DIMETH. BENZ(A)ANTHR	6	0	0	5	0	0	.	.	.	.	.	.
	BENZO(E) PYRENE	12	0	0	11	0	0	.	.	.	.	.	.
	BENZO(B) FLUORANTHEN	12	0	0	11	0	0	.	.	.	.	.	.
	PERYLENE	12	0	0	11	0	0	.	.	.	.	.	.
	BENZO(K) FLUORANTHEN	12	0	0	11	0	0	.	.	.	.	.	.
	BENZO(A) PYRENE	6	0	0	5	0	0	.	.	.	.	.	.
	BENZO(G,H,I) PERYLEN	12	0	0	11	0	0	.	.	.	.	.	.
	DIBENZO(A,H) ANTHRAC	12	0	0	11	0	0	.	.	.	.	.	.
	INDENO(1,2,3-C,D) PY	12	0	0	11	0	0	.	.	.	.	.	.
	BENZO(B) CHRYSENE	12	0	0	11	0	0	.	.	.	.	.	.
	CORONENE	12	0	0	11	0	0	.	.	.	.	.	.
*TOTAL SCAN PAH		192	0	0	175	0	0	0	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	12	0	0	11	0	0	11	0	0	12	0	0
	ALPHA BHC	12	0	8	11	0	7	11	0	7	12	0	8
	BETA BHC	12	0	0	11	0	0	11	0	1	12	0	0
	LINDANE	12	0	0	11	0	0	11	0	0	12	0	1

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	ALPHA CHLORDANE	12	0	0	11	0	0	11	0	0	12	0	0
	GAMMA CHLORDANE	12	0	0	11	0	0	11	0	0	12	0	0
	DIELDRIN	12	0	0	11	0	0	11	0	0	12	0	0
	METHOXYCHLOR	12	0	0	11	0	0	11	0	0	12	0	0
	ENDOSULFAN 1	12	0	0	11	0	0	11	0	0	12	0	0
	ENDOSULFAN II	12	0	0	11	0	0	11	0	0	12	0	0
	ENDRIN	12	0	0	11	0	0	11	0	0	12	0	0
	ENDOSULFAN SULPHATE	12	0	0	11	0	0	11	0	0	12	0	0
	HEPTACHLOR EPOXIDE	12	0	0	11	0	0	11	0	0	12	0	0
	HEPTACHLOR	12	0	0	11	0	0	11	0	0	12	0	0
	MIREX	12	0	0	11	0	0	11	0	0	12	0	0
	OXYCHLORDANE	12	0	0	11	0	0	11	0	0	12	0	0
	OPDDT	12	0	0	11	0	0	11	0	0	12	0	0
	PCB	12	0	0	11	0	0	11	0	0	12	0	0
	DDD	12	0	0	11	0	0	11	0	0	12	0	0
	PPDDE	12	0	0	11	0	0	11	0	0	12	0	0
	PPDDT	12	0	0	11	0	0	11	0	0	12	0	0
	AMETRINE	12	0	0	11	0	0	6	0	0	7	0	0
	ATRAZINE	12	0	1	11	0	1	6	0	0	7	0	0
	ATRATONE	12	0	0	11	0	0	6	0	0	7	0	0
	CYANAZINE (BLADEX)	12	0	0	11	0	0	6	0	0	7	0	0
	D-ETHYL ATRAZINE	12	0	0	11	0	0	6	0	0	7	0	0
	D-ETHYL SIMAZINE	12	0	0	11	0	0	6	0	0	7	0	0
	PROMETONE	12	0	0	11	0	0	6	0	0	7	0	0
	PROPAZINE	12	0	0	11	0	0	6	0	0	7	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	PROMETRYNE	12	0	0	11	0	0	6	0	0	7	0	0
	METRIBUZIN (SENCOR)	12	0	0	11	0	0	6	0	0	7	0	0
	SIMAZINE	12	0	0	11	0	0	6	0	0	7	0	0
	ALACHLOR (LASSO)	12	0	0	11	0	0	6	0	0	7	0	0
	METOLACHLOR	12	0	0	11	0	0	6	0	0	7	0	0
*TOTAL SCAN PESTICIDES & PCB		408	0	9	374	0	8	309	0	8	343	0	9
PHENOLICS	PHENOLICS	12	7	5	11	8	3	.	.	.	.	.	.
*TOTAL SCAN PHENOLICS		12	7	5	11	8	3	0	0	0	0	0	0
SPECIFIC PESTICIDES	TOXAPHENE	12	0	0	11	0	0	11	0	0	12	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.	.	.	.
	2,4-DB	2	0	0	2	0	0	.	.	.	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.	.	.	.
	DICHLOROVOS	2	0	0	2	0	0	.	.	.	.	.	.
	CHLORPYRIFOS	2	0	0	2	0	0	.	.	.	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	SITE RAW TOTAL	RAW POSITIVE	RAW TRACE	TREATED TOTAL	TREATED POSITIVE	TREATED TRACE	SITE 1 TOTAL	SITE 1 POSITIVE	SITE 1 TRACE	SITE 2 TOTAL	SITE 2 POSITIVE	SITE 2 TRACE
SPECIFIC PESTICIDES	ETHION	2	0	0	2	0	0	.	.	.	.	.	.
	AZINPHOS-METHYL	0	0	0	0	0	0	.	.	.	.	.	.
	MALATHION	2	0	0	2	0	0	.	.	.	.	.	.
	MEVINPHOS	2	0	0	2	0	0	.	.	.	.	.	.
	METHYL PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	METHYLTRITHION	2	0	0	2	0	0	.	.	.	.	.	.
	PARATHION	2	0	0	2	0	0	.	.	.	.	.	.
	PHORATE	2	0	0	2	0	0	.	.	.	.	.	.
	RELDAN	2	0	0	2	0	0	.	.	.	.	.	.
	RONNEL	2	0	0	2	0	0	.	.	.	.	.	.
	AMINOCARB	0	0	0	0	0	0	.	.	.	.	.	.
	BENOMYL	1	0	0	1	0	0	.	.	.	.	.	.
	BUX	0	0	0	0	0	0	.	.	.	.	.	.
	CARBOFURAN	2	0	0	2	0	0	.	.	.	.	.	.
	CICP	2	0	0	2	0	0	.	.	.	.	.	.
	DIALLATE	2	0	0	2	0	0	.	.	.	.	.	.
	EPTAM	2	0	0	2	0	0	.	.	.	.	.	.
	IPC	2	0	0	2	0	0	.	.	.	.	.	.
	PROPOXUR	2	0	0	2	0	0	.	.	.	.	.	.
	CARBARYL	2	0	0	2	0	0	.	.	.	.	.	.
	BUTYLATE	2	0	0	2	0	0	.	.	.	.	.	.
*TOTAL SCAN SPECIFIC PESTICIDES		65	0	0	64	0	0	11	0	0	12	0	0
VOLATILES	BENZENE	12	0	1	10	0	0	11	0	4	11	0	2

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	TOLUENE	12	0	0	10	0	5	11	0	6	11	0	5
	ETHYLBENZENE	12	0	2	10	0	3	11	0	4	11	0	2
	P-XYLENE	12	0	0	10	0	0	11	0	0	11	0	0
	M-XYLENE	12	0	0	10	0	2	11	0	0	11	0	0
	O-XYLENE	12	0	0	10	0	2	11	0	4	11	0	2
	STYRENE	12	1	6	10	0	8	11	0	8	11	0	9
	1,1 DICHLOROETHYLENE	12	0	0	10	0	0	11	0	0	11	0	0
	METHYLENE CHLORIDE	12	0	0	10	0	0	11	0	0	11	0	0
	T1,2DICHLOROETHYLENE	12	0	0	10	0	0	11	0	0	11	0	0
	1,1 DICHLOROETHANE	12	0	0	10	0	0	11	0	0	11	0	0
	CHLOROFORM	12	0	2	10	10	0	11	11	0	11	11	0
	111, TRICHLOROETHANE	12	0	3	10	1	1	11	0	2	11	0	1
	1,2 DICHLOROETHANE	12	0	0	10	0	0	11	0	0	11	0	0
	CARBON TETRACHLORIDE	12	0	0	10	0	0	11	0	0	11	0	0
	1,2 DICHLOROPROPANE	12	0	0	10	0	0	11	0	0	11	0	0
	TRICHLOROETHYLENE	12	0	0	10	0	0	11	0	0	11	0	0
	DICHLOROBROMOMETHANE	12	0	2	10	10	0	11	11	0	11	11	0
	112 TRICHLOROETHANE	12	0	0	10	0	0	11	0	0	11	0	0
	CHLORODIBROMOMETHANE	12	0	0	10	10	0	11	11	0	11	11	0
	T-CHLOROETHYLENE	12	0	0	10	0	0	11	0	1	11	0	1
	BROMOFORM	12	0	0	10	0	10	11	0	11	11	0	11
	1122 T-CHLOROETHANE	12	0	0	10	0	0	11	0	0	11	0	0
	CHLOROBENZENE	12	0	0	10	0	0	11	0	0	11	0	0
	1,4 DICHLOROBENZENE	12	0	0	10	0	0	11	0	0	11	0	0
	1,3 DICHLOROBENZENE	12	0	0	10	0	0	11	0	0	11	0	1

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON

SUMMARY TABLE OF RESULTS (1989)

		SITE											
		RAW			TREATED			SITE 1			SITE 2		
SCAN	PARAMETER	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	1,2 DICHLOROBENZENE	12	0	0	10	0	0	11	0	0	11	0	0
	ETHLYENE DIBROMIDE	12	0	0	10	0	0	11	0	0	11	0	0
	TOTL TRIHALOMETHANES	12	0	0	10	10	0	11	11	0	11	11	0
*TOTAL SCAN VOLATILES		348	1	16	290	41	31	319	44	40	319	44	34
*TOTAL GROUP ORGANIC		1205	8	30	1080	49	42	793	44	48	842	44	43
TOTAL		1810	435	121	1658	402	158	1853	797	223	1968	835	236

KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 ^{0}C within 48 hours
2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, the AO is a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. Studies of long-term environmental trends and modelling may however, be adversely affected by the exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported with the code "<T". Results qualified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. The average of such data however, is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!IV	No Data: Inverted Septum
!LA	No Data: Laboratory Accident
!LD	No Data: Test Queued After Sample Discarded

!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UAL	Unreliable: Sample Age Exceeds Normal Limit
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
USD	Unreliable: Sample Decomposition Noted
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
BACTERIOLOGICAL						
FECAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 0 (A1)	
JAN	0 T24	.	.	.	.	.
FEB	0 T24	.	.	.	.	.
MAR	1 T06	.	.	.	.	.
APR	0	.	.	.	.	.
MAY	2	.	.	.	.	.
JUN	5	.	.	.	.	.
JUL	0	.	.	.	.	.
AUG	0	.	.	.	.	.
SEP	0	.	.	.	.	.
OCT	7	.	.	.	.	.
NOV	0	.	.	.	.	.
DEC	2	.	.	.	.	.
STANDRD PLATE CNT MF ( )			DET'N LIMIT = 0		GUIDELINE = 500/ML (A1)	
JAN	.	0 <=>	.	20 T06	.	2 <=>
FEB	.	3 <=>	.	1 <=>	.	1 <=>
MAR	.	0 <=>	.	5 <=>	.	0 <=>
APR	.	2 <=>	.	6 <=>	.	1 <=>
MAY	.	.	.	.	.	1 <=>
JUN	.	2 <=>	.	1 <=>	.	25
JUL	.	0 <=>	.	12	.	3 <=>
AUG	.	3 <=>	.	18	.	1 <=>
SEP	.	0 <=>	.	5 <=>	.	5 <=>
OCT	.	1 <=>	.	0 <=>	.	0 <=>
NOV	.	1 <=>	.	3 <=>	.	1 <=>
DEC	.	7 <=>	.	7 <=>	.	0 <=>
TOTAL COLIFORM MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = 5/100ML(A1)	
JAN	3 T24	0 T24	.	0 T06	.	0 T24
FEB	11 T24	0 T24	.	0 T06	.	0 T24
MAR	6 T06	1 T06	.	0 T06	.	0 T06
APR	8	0	.	0	.	0
MAY	63	.	.	.	.	0
JUN	25 A3C	0	.	0	.	0
JUL	0	0	.	0	.	0
AUG	0	0	.	0	.	0
SEP	5 A3C	0	.	0	.	0
OCT	84 A3C	0	.	0	.	0
NOV	40	0	.	0	.	0
DEC	40 <=>	0	.	0	.	0
T COLIFORM BCKGRD MF (CT/100ML)			DET'N LIMIT = 0		GUIDELINE = N/A	
JAN	11 T24	0 T24	.	0 T06	.	0 T24
FEB	102 T24	0 T24	.	0 T06	.	0 T24
MAR	50 T06	0 T06	.	0 T06	.	0 T06

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	61	0	.	0	.	0
MAY	155	.	.	.	.	0
JUN	1070 A3C	0	.	0	.	0
JUL	3	0	.	0	.	0
AUG	2400 >	0	.	0	.	4
SEP	1600 A3C	0	.	0	.	0
OCT	1200 A3C	0	.	1	.	0
NOV	124	0	.	0	.	0
DEC	90 <=>	0	.	0	.	0

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (FLD)						
FLD CHLORINE (COMB) ( )			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	1.270	1.100	1.300	.300	.900
FEB	.	1.210	1.200	1.300	.300	.700
MAR	.	1.200	.900	1.300	.	.900
APR	.	1.150	.500	1.100	.300	.900
MAY	.	.	.	.	.	.400
JUN	.000	.890	.900	.900	.000	.700
JUL	.	1.170	.300	1.100	.	.700
AUG	.	1.210	.100	1.000	.	.700
SEP	.	1.120	.300	.900	.	.500
OCT	.	.970	.100	1.100	.	.500
NOV	.	1.180	.100	1.000	.000	.700
DEC	.	1.110	.500	1.200	.	.900
FLD CHLORINE FREE ( )			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	.	.	.	.	.300
FEB	.	.	.	1.300	.	.
MAR	.	.	.	.	.	.300
APR	.	.	.500	.	.	.
MAY	.	.	.	.	.	.300
JUN	.000	.000	.000	.000	.000	.000
JUL	.	.000	.000	.000	.	.
AUG	.	.000	.000	.000	.	.
SEP	.	.000	.000	.000	.	.
OCT	.	.000	.000	.000	.	.
NOV	.	.000	.000	.100	.000	.000
DEC	.	.	.000	.000	.	.
FLD CHLORINE (TOTAL) ( )			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.	1.270	1.100	1.300	.300	1.200
FEB	.	1.210	1.200	1.300	.300	.700
MAR	.	1.200	.900	1.300	.	1.200
APR	.	1.150	.500	1.100	.300	.900
MAY	.	.	.	.	.	.700
JUN	.000	.890	.900	.900	.000	.700
JUL	.	1.170	.300	1.100	.	.700
AUG	.	1.210	.100	1.000	.	.700
SEP	.	1.120	.300	.900	.	.500
OCT	.	.970	.100	1.100	.	.500
NOV	.	1.180	.100	1.100	.000	.700
DEC	.	.	.500	1.200	.	.900
FLD PH (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	7.700	7.300	7.600	7.400	7.400	7.400
FEB	7.750	7.300	7.600	7.800	7.200	7.400
MAR	7.800	7.450	7.600	7.800	7.400	7.600

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	7.650	7.300	7.600	7.800	7.400	7.600
MAY	8.000	.	.	.	.	.
JUN	8.100	7.550	7.700	7.600	7.600	7.400
JUL	7.900	7.400	7.600	7.700	7.400	7.400
AUG	8.050	7.400	7.500	7.600	8.000	8.200
SEP	7.800	7.200	7.400	7.600	7.400	7.400
OCT	.	.	7.200	7.600	7.600	7.600
NOV	7.500	7.200	7.400	7.600	7.400	7.600
DEC	.	.	7.600	.	7.400	7.600
FLD TEMPERATURE (DEG.C)			DET'N LIMIT = N/A		GUIDELINE = 15 (A1)	
JAN	6.000	6.000	6.000	5.000	18.000	9.000
FEB	6.000	6.000	6.000	4.000	14.000	8.000
MAR	7.000	7.000	6.000	4.000	20.000	6.000
APR	8.000	8.000	15.000	8.000	20.000	8.000
MAY	12.000	.	.	.	20.000	11.000
JUN	18.000	18.000	24.000	17.000	22.000	15.000
JUL	21.000	21.000	23.000	21.000	23.000	17.000
AUG	22.000	22.000	23.000	22.000	21.000	19.000
SEP	19.000	19.000	22.000	21.000	.	.
OCT	13.000	13.000	18.000	15.000	.	.
NOV	9.000	9.000	13.000	9.000	22.000	11.000
DEC	4.000	4.000	8.000	6.000	22.000	8.000
FLD TURBIDITY (FTU)			DET'N LIMIT = N/A		GUIDELINE = 1.0 (A1)	
JAN	.800	.100	.	.	.	.
FEB	1.700	.120	.	.	.	.
MAR	2.400	.300	.	.	.	.
APR	.700	.130	.	.	.	.
MAY	1.100	.	.	.	.	.
JUN	1.400	.210	.	.	.	.
JUL	2.600	.140	.	.	.	.
AUG	2.200	.200	.	.	.	.
SEP	1.500	.140	.	.	.	.
OCT	2.700	.070	.	.	.	.
NOV	1.100	.070	.	.	.	.
DEC	1.200	.050	.	.	.	.

TABLE 5

ORINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
CHEMISTRY (LAB)						
ALKALINITY (MG/L)			DET'N LIMIT = .200		GUIDELINE = 30-500 (A4)	
JAN	101.400	94.000	95.700	95.400	96.700	96.300
FEB	103.000	97.300	97.000	97.200	97.900	97.300
MAR	99.800	93.300	94.700	94.800	93.900	93.800
APR	101.700	94.000	95.600	95.700	96.100	96.000
MAY	102.900	.	.	.	95.200	95.000
JUN	100.700	95.100	94.700	95.000	96.100	96.800
JUL	IUR	IUR	94.100	93.500	97.100	97.800
AUG	96.800	91.300	91.800	91.800	93.000	93.900
SEP	94.900	88.500	88.700	88.700	89.000	89.900
OCT	100.800	91.800	92.800	93.100	96.100	96.300
NOV	101.400	95.700	96.600	96.600	96.200	96.300
DEC	102.600	97.900	98.400	99.000	98.600	98.300
CALCIUM (MG/L)			DET'N LIMIT = .100		GUIDELINE = 100 (F2)	
JAN	39.200	39.000	39.200	38.800	41.600	41.400
FEB	41.000	41.000	41.200	41.000	41.200	40.800
MAR	42.800	43.600	43.400	42.800	42.200	42.600
APR	41.000	41.800	39.800	40.600	40.600	41.400
MAY	40.400	.	.	.	39.800	40.200
JUN	39.800	39.200	39.600	39.200	42.000	41.200
JUL	35.400	34.200	36.400	35.800	38.600	38.400
AUG	38.200	37.600	38.600	37.200	41.000	40.800
SEP	38.600	38.800	39.000	39.000	39.600	40.200
OCT	40.000	38.800	39.000	39.600	42.000	41.800
NOV	41.000	41.600	41.000	40.600	42.600	43.600
DEC	39.800	39.700	40.400	40.500	39.700	40.000
CHLORIDE (MG/L)			DET'N LIMIT = .200		GUIDELINE = 250 (A3)	
JAN	23.000	25.000	24.900	24.800	25.400	25.400
FEB	25.100	26.300	27.300	27.100	25.100	25.100
MAR	26.000	33.400	32.800	32.800	35.500	34.900
APR	26.000	28.300	27.500	27.800	27.400	27.300
MAY	29.600	.	.	.	30.700	30.400
JUN	23.400	25.500	25.800	25.600	26.700	26.800
JUL	22.400	24.600	25.200	25.000	27.000	27.000
AUG	22.700	24.500	25.400	25.200	25.700	25.600
SEP	22.400	24.900	25.900	24.900	27.200	26.900
OCT	24.400	26.400	26.100	26.500	26.600	26.500
NOV	22.200	24.200	24.500	24.200	25.700	25.700
DEC	22.800	24.800	25.500	25.300	26.200	26.300
COLOUR (HZU)			DET'N LIMIT = .5		GUIDELINE = 5.0 (A3)	
JAN	1.000 <T	.500 <T	1.500 <T	1.500 <T	1.000 <T	.500 <T
FEB	2.000 <T	.500 <T	1.000 <T	1.000 <T	.500 <T	BDL
MAR	2.500	1.000 <T	2.000 <T	2.000 <T	1.500 <T	1.000 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	2.000 <T	.500 <T	1.000 <T	1.500 <T	1.000 <T	.500 <T
MAY	2.500	.	.	.	1.500 <T	1.000 <T
JUN	2.500	1.500 <T	1.500 <T	1.500 <T	1.500 <T	1.000 <T
JUL	IUR	IUR	1.000 <T	1.000 <T	.500 <T	.500 <T
AUG	2.000 <T	1.000 <T	1.000 <T	2.000 <T	1.500 <T	1.500 <T
SEP	2.000 <T	1.000 <T	1.500 <T	2.000 <T	1.500 <T	1.000 <T
OCT	2.500	1.000 <T	1.500 <T	2.000 <T	1.500 <T	1.500 <T
NOV	1.500 <T	1.000 <T	1.000 <T	1.500 <T	1.000 <T	1.000 <T
DEC	2.000 <T	1.000 <T	1.500 <T	1.500 <T	1.000 <T	1.000 <T
CONDUCTIVITY (UMHO/CM)			DET'N LIMIT = 1		GUIDELINE = 400 (F2)	
JAN	324	327	330	328	334	332
FEB	342	343	344	345	338	336
MAR	340	370	364	364	377	373
APR	348	352	348	349	349	348
MAY	355	.	.	.	353	350
JUN	328	331	332	330	339	340
JUL	IUR	IUR	328	324	342	341
AUG	314	320	324	323	327	327
SEP	313	319	324	320	332	332
OCT	331	333	331	332	340	341
NOV	324	327	330	328	333	333
DEC	331	334	337	335	341	341
FLUORIDE (MG/L)			DET'N LIMIT = .01		GUIDELINE = 2.400 (A1)	
JAN	.140	1.080	1.200	1.200	.960	.960
FEB	.140	1.020	.980	.980	1.160	1.160
MAR	.140	1.260	1.040	1.020	1.120	1.100
APR	.160	1.220	1.120	1.000	1.100	1.080
MAY	.180	.	.	.	1.040	1.040
JUN	.120	.880	1.140	1.040	1.040	1.040
JUL	.100	.860	.320	.760	1.040	1.040
AUG	.140	.980	.940	.940	.960	.960
SEP	.120	1.000	1.040	1.060	1.060	1.060
OCT	.160	1.200	1.120	1.180	1.100	1.080
NOV	.120	.840	.940	1.080	1.000	.960
DEC	.140	.140	.160	.160	.160	.180
HARDNESS (MG/L)			DET'N LIMIT = .500		GUIDELINE = 80-100 (A4)	
JAN	133.000	132.000	133.000	131.000	139.000	138.000
FEB	139.000	139.000	139.000	139.000	138.000	136.000
MAR	139.000	143.000	143.000	140.000	143.000	143.000
APR	137.000	139.000	133.000	136.000	136.000	137.000
MAY	136.000	.	.	.	134.000	135.000
JUN	134.000	133.000	133.000	132.000	139.000	137.000
JUL	123.000	119.000	126.000	124.000	131.000	131.000
AUG	132.000	128.000	132.000	128.000	137.000	137.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
SEP	131.000	131.000	132.000	131.000	133.000	134.000
OCT	134.000	132.000	132.000	133.000	140.000	139.000
NOV	137.000	140.000	138.000	137.000	142.000	145.000
DEC	133.400	133.700	135.300	135.200	133.100	134.100
IONCAL (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	2.372	.741	1.008	1.733	1.369	1.570
FEB	1.576	3.646	3.034	3.188	2.725	1.926
MAR	3.486	3.762	3.487	2.785	3.000	4.004
APR	1.358	1.395	.978	.102	.206	1.163
MAY	5.062	.	.	.	2.782	2.324
JUN	.395	1.158	.460	.372	2.629	.966
JUL	.000 NAF	.000 NAF	4.146	4.432	2.986	3.144
AUG	.667	2.474	.135	2.705	1.573	1.507
SEP	1.305	2.077	2.249	2.552	1.097	2.584
OCT	2.132	.558	.964	.021	.859	.334
NOV	.425	3.019	1.378	1.356	2.521	4.872
DEC	3.985	4.044	2.870	2.565	4.672	4.263
LANGELIERS INDEX (DMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = N/A	
JAN	.356	.100	.090	.024	.110	.226
FEB	.510	.335	.356	.345	.311	.314
MAR	.475	.261	.256	.271	.149	.173
APR	.494	.538	.544	.493	.555	.573
MAY	.562	.	.	.	.332	.386
JUN	.439	.287	.320	.307	.331	.356
JUL	.	.	.361	.421	.478	.499
AUG	.415	.152	.156	.140	.227	.229
SEP	.371	.233	.215	.256	.223	.254
OCT	.391	.287	.284	.322	.431	.389
NOV	.455	.316	.314	.309	.268	.299
DEC	.587	.575	.484	.588	.567	.499
MAGNESIUM (MG/L)			DET'N LIMIT = .050		GUIDELINE = 30 (F2)	
JAN	8.500	8.400	8.400	8.400	8.500	8.500
FEB	8.900	8.900	8.800	8.900	8.500	8.400
MAR	7.900	8.300	8.500	8.200	9.000	8.800
APR	8.300	8.300	8.200	8.400	8.400	8.200
MAY	8.500	.	.	.	8.400	8.400
JUN	8.400	8.400	8.300	8.300	8.300	8.400
JUL	8.300	8.200	8.400	8.400	8.500	8.500
AUG	8.800	8.400	8.600	8.600	8.400	8.500
SEP	8.300	8.400	8.500	8.300	8.200	8.300
OCT	8.200	8.500	8.200	8.300	8.500	8.500
NOV	8.500	8.800	8.600	8.600	8.600	8.700
DEC	8.250	8.400	8.350	8.300	8.300	8.350

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
SODIUM (MG/L)			DET'N LIMIT = .200		GUIDELINE = 200 (C3)	
JAN	12.200	12.200	12.400	12.200	12.400	12.200
FEB	14.000	14.000	14.000	14.000	12.600	12.600
MAR	13.600	16.600	16.200	16.000	17.800	17.800
APR	13.600	13.800	13.800	13.200	13.200	13.600
MAY	15.200	.	.	.	15.000	14.800
JUN	12.600	12.400	12.800	12.600	13.400	13.200
JUL	12.000	12.400	11.800	12.400	13.200	13.200
AUG	12.600	11.600	12.200	11.800	12.000	12.000
SEP	11.800	11.800	12.000	11.800	12.800	12.800
OCT	13.000	12.600	12.400	12.600	12.600	12.400
NOV	11.400	11.600	11.800	11.800	11.600	11.800
DEC	11.600	11.300	11.800	11.900	12.300	12.100
AMMONIUM TOTAL (MG/L)			DET'N LIMIT = 0.002		GUIDELINE = .05 (F2)	
JAN	.004 <T	.078	.174	.172	.186	.156
FEB	.054	.224	.184	.188	.188	.186
MAR	.012	.214	.224	.222	.170	.156
APR	.056	.166	.210	.220	.160	.172
MAY	.096	.	.	.	.146	.130
JUN	.030	.182	.158	.174	.124	.160
JUL	.034	.188	.170	.190	.078	.172
AUG	.028	.198	.226	.180	.050	.170
SEP	.018	.200	.186	.174	BDL	.146
OCT	.026	.388	.158	.198	.132	.130
NOV	.002 <T	.110	.124	.214	.142	.122
DEC	BDL	.120	.158	.190	.126	.152
NITRITE (MG/L)			DET'N LIMIT = 0.001		GUIDELINE = 1.000 (A1)	
JAN	.001 <T	.001 <T	.003 <T	.002 <T	.009	.003 <T
FEB	.006	.001 <T	.001 <T	.001 <T	.007	.003 <T
MAR	.004 <T	BDL	.001 <T	.001 <T	.014	.006
APR	.007	.001 <T	.003 <T	.001 <T	.019	.005
MAY	.017	.	.	.	.022	.003 <T
JUN	.006	BDL	.003 <T	.001 <T	.053	.008
JUL	.003 <T	.001 <T	.008	.006	.118	.011
AUG	.008	.001 <T	.006	.005	.133	.004 <T
SEP	.006	.001 <T	.027	.016	.208	.059
OCT	.013	.002 <T	.006	.004 <T	.022	.004 <T
NOV	.003 <T	.001 <T	.002 <T	.001 <T	.010	.003 <T
DEC	.002 <T	.001 <T	.002 <T	.002 <T	.021	.001 <T
TOTAL NITRATES (MG/L)			DET'N LIMIT = .020		GUIDELINE = 10.000 (A1)	
JAN	.380	.395	.410	.400	.435	.430
FEB	.445	.455	.445	.435	.405	.395
MAR	.350	.440	.425	.420	.460	.465
APR	.400	.390	.375	.365	.400	.365

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
MAY	.430	.	.	.	.430	.410
JUN	.250	.260	.260	.270	.380	.350
JUL	IUR	IUR	.190	.475	.525	.375
AUG	.225	.185	.210	.205	.340	.210
SEP	.165	.195	.225	.225	.425	.310
OCT	.350	.320	.330	.335	.415	.405
NOV	.370	.385	.420	.405	.420	.420
DEC	.385	.400	.415	.405	.475	.435
NITROGEN TOT KJELD (MG/L)			DET'N LIMIT = .020		GUIDELINE = N/A	
JAN	.200	.240	.370	.340	.340	.280
FEB	.280	.360	.320	.330	.390	.340
MAR	.260	.350	.370	.360	.340	.320
APR	.320	.320	.360	.390	.390	.340
MAY	.430	.	.	.	.420	.380
JUN	.300	.350	.350	.400	.360	.360
JUL	.450	.510	.360	.430	.400	.380
AUG	.290	.370	.590	.390	.280	.400
SEP	.270	.390	.450	.410	.250	.440
OCT	.210	.470	.300	.320	.300	.290
NOV	.210	.270	.280	.340	.320	.280
DEC	.210	.290	.330	.360	.300	.330
PH (DIMNSLESS)			DET'N LIMIT = N/A		GUIDELINE = 6.5-8.5(A4)	
JAN	8.200	7.980	7.960	7.900	7.950	8.070
FEB	8.330	8.180	8.200	8.190	8.150	8.160
MAR	8.290	8.100	8.090	8.110	8.000	8.020
APR	8.320	8.390	8.410	8.350	8.410	8.420
MAY	8.390	.	.	.	8.200	8.250
JUN	8.280	8.160	8.190	8.180	8.170	8.200
JUL	IUR	IUR	8.270	8.340	8.350	8.370
AUG	8.290	8.060	8.050	8.050	8.090	8.090
SEP	8.250	8.140	8.120	8.160	8.120	8.140
OCT	8.230	8.180	8.170	8.200	8.270	8.230
NOV	8.280	8.160	8.160	8.160	8.100	8.120
DEC	8.420	8.430	8.330	8.430	8.420	8.350
PHOSPHORUS FIL REACT (MG/L)			DET'N LIMIT = .0005		GUIDELINE = N/A	
JAN	.000 <T	.001 <T	.	.	.	.
FEB	.000 <T	.000 <T	.	.	.	.
MAR	BDL	BDL	.	.	.	.
APR	BDL	BDL	.	.	.	.
MAY	BDL	.	.	.	.	.
JUN	BDL	BDL	.	.	.	.
JUL	.003	.001 <T	.	.	.	.
AUG	.001 <T	.000 <T	.	.	.	.
SEP	BDL	BDL	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
OCT	BDL	BDL	.	.	.	.
NOV	.003	.002 <T	.	.	.	.
DEC	BDL	BDL	.	.	.	.
PHOSPHORUS TOTAL (MG/L)			DET'N LIMIT = .002		GUIDELINE = .40 (F2)	
JAN	.010	.003 <T	.	.	.	.
FEB	.015	.005 <T	.	.	.	.
MAR	.011	.006 <T	.	.	.	.
APR	.011	.005 <T	.	.	.	.
MAY	.016	.	.	.	.	.
JUN	.011	.004 <T	.	.	.	.
JUL	.011	.004 <T	.	.	.	.
AUG	.016	.006 <T	.	.	.	.
SEP	.016	.008 <T	.	.	.	.
OCT	.012	BDL	.	.	.	.
NOV	.015	.012	.	.	.	.
DEC	.011	.003 <T	.	.	.	.
SULPHATE (MG/L)			DET'N LIMIT = .200		GUIDELINE = 500. (A3)	
JAN	26.820	28.070	28.170	28.340	28.930	28.020
FEB	25.860	27.060	26.910	26.720	25.660	26.150
MAR	24.490	30.090	29.580	27.670	29.560	28.930
APR	27.540	30.140	28.470	28.130	28.110	28.290
MAY	30.280	.	.	.	30.380	30.800
JUN	26.330	28.680	27.480	27.390	27.960	28.050
JUL	IUR	IUR	26.520	26.670	26.870	26.790
AUG	27.220	30.390	29.270	29.430	28.980	29.120
SEP	26.020	29.040	28.360	28.050	28.600	28.600
OCT	27.760	30.060	28.170	28.270	29.880	29.800
NOV	26.270	28.410	27.780	27.630	28.210	27.590
DEC	27.490	29.470	28.960	28.560	29.400	29.690
TURBIDITY (FTU)			DET'N LIMIT = .02		GUIDELINE = 1.00 (A1)	
JAN	1.080	.600	.540	.330	.340	.380
FEB	1.820	.320	.280	.280	.980	.460
MAR	1.150	.300	.400	.450	.350	.450
APR	1.000	.510	.370	.220 <T	.250 <T	.360
MAY	1.240	.	.	.	.660	.790
JUN	1.350	.380	.200 <T	.300	.200 <T	.180 <T
JUL	IUR	IUR	.210 <T	.250	.630	.720
AUG	1.200	.390	.240	.300	.800	.660
SEP	1.940	.610	.550	.450	.420	.520
OCT	2.400	.670	.430	.380	.410	.400
NOV	.560	.270	.300	.270	.240 <T	.190 <T
DEC	1.250	.230 <T	.160 <T	.260	.240 <T	.150 <T

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
	METALS					
SILVER (UG/L)				DET'N LIMIT = .020	GUIDELINE = 50. (A1)	
JAN	BDL	.200 <T	.160 <T	.130 <T	.050 <T	.060 <T
FEB	.030 <T	.260 <T	.300 <T	.250 <T	.280 <T	.320 <T
MAR	BDL	BDL	BDL	BDL	BDL	BDL
APR	.040 <T	.080 <T	.040 <T	.060 <T	.060 <T	.030 <T
MAY	BDL	.	.	.	BDL	BDL
JUN	BDL	BDL	BDL	BDL	.070 <T	.030 <T
JUL	BDL	.070 <T	BDL	BDL	.110 <T	.040 <T
AUG	BDL	.130 <T	.050 <T	BDL	.050 <T	.050 <T
SEP	BDL	.050 <T	.040 <T	.030 <T	BDL	.030 <T
OCT	BDL	BDL	BDL	BDL	BDL	BDL
NOV	BDL	BDL	BDL	BDL	BDL	BDL
DEC	BDL	BDL	BDL	BDL	BDL	BDL
ALUMINUM (UG/L)				DET'N LIMIT = .050	GUIDELINE = 100.(A4)	
JAN	6.496	61.480	56.840	54.520	60.320	47.560
FEB	13.920	76.560	61.480	60.320	55.680	49.880
MAR	18.560	99.760	105.560	107.880	78.880	75.400
APR	8.004	104.400	107.880	100.920	102.080	85.840
MAY	7.800	.	.	.	120.000	120.000
JUN	23.000	310.000	260.000	240.000	200.000	190.000
JUL	15.000	250.000	220.000	210.000	180.000	180.000
AUG	6.600	240.000	210.000	210.000	190.000	200.000
SEP	7.000	200.000	170.000	180.000	220.000	190.000
OCT	28.000	79.000	74.000	77.000	83.000	72.000
NOV	8.900	72.000	69.000	62.000	97.000	64.000
DEC	23.000	62.000	60.000	58.000	60.000	55.000
ARSENIC (UG/L)				DET'N LIMIT = 0.050	GUIDELINE = 50.0 (A1)	
JAN	.550 <T	BDL	BDL	.070 <T	BDL	BDL
FEB	1.100	1.000 <T	1.200	1.200	1.300	1.300
MAR	.990 <T	1.000 <T	.840 <T	.890 <T	.640 <T	1.100
APR	1.700	1.400	1.400	1.300	1.700	1.300
MAY	.070 <T	.	.	.	.180 <T	.570 <T
JUN	1.400	1.500	1.300	1.300	1.700	1.200
JUL	1.700	1.800	1.600	1.700	1.900	1.600
AUG	1.000 <T	1.300	1.300	1.300	1.400	1.200
SEP	.870 <T	1.100	1.100	.950 <T	.980 <T	1.200
OCT	.820 <T	.460 <T	.530 <T	.620 <T	.690 <T	.790 <T
NOV	.970 <T	.600 <T	.550 <T	.600 <T	.770 <T	.720 <T
DEC	1.100	.360 <T	.480 <T	.650 <T	.580 <T	.570 <T
BARIUM (UG/L)				DET'N LIMIT = 0.020	GUIDELINE = 1000. (A1)	
JAN	23.000	23.000	23.000	23.000	24.000	23.000
FEB	26.000	24.000	25.000	25.000	24.000	23.000
MAR	25.000	23.000	24.000	24.000	25.000	23.000

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	23.000	22.000	22.000	22.000	22.000	22.000
MAY	25.000	.	.	.	25.000	25.000
JUN	24.000	24.000	26.000	24.000	25.000	24.000
JUL	24.000	24.000	27.000	24.000	26.000	27.000
AUG	22.000	22.000	24.000	23.000	23.000	22.000
SEP	22.000	22.000	23.000	23.000	24.000	24.000
OCT	26.000	25.000	26.000	24.000	26.000	25.000
NOV	23.000	23.000	23.000	22.000	25.000	23.000
DEC	23.000	23.000	22.000	25.000	25.000	25.000
BORON (UG/L)				DET'N LIMIT = 0.200 GUIDELINE = 5000. (A1)		
JAN	62.000	32.000	71.000	46.000	79.000	39.000
FEB	30.000	27.000	33.000	51.000	59.000	54.000
MAR	49.000	130.000	85.000	140.000	190.000	43.000
APR	70.000	30.000	35.000	32.000	71.000	36.000
MAY	29.000	.	.	.	31.000	40.000
JUN	34.000	28.000	34.000	35.000	41.000	32.000
JUL	48.000	50.000	51.000	36.000	47.000	37.000
AUG	39.000	51.000	52.000	52.000	55.000	39.000
SEP	29.000	43.000	49.000	38.000	34.000	46.000
OCT	28.000	28.000	29.000	27.000	26.000	28.000
NOV	25.000	26.000	25.000	25.000	28.000	27.000
DEC	26.000	29.000	27.000	28.000	29.000	31.000
BERYLLIUM (UG/L)				DET'N LIMIT = 0.010 GUIDELINE = N/A		
JAN	BDL	BDL	.020 <T	BDL	.050 <T	BDL
FEB	BDL	BDL	BDL	BDL	.020 <T	BDL
MAR	.140 <T	.300 <T	.230 <T	.310 <T	.230 <T	.200 <T
APR	.050 <T	BDL	BDL	.040 <T	.300 <T	BDL
MAY	BDL	.	.	.	.080 <T	.140 <T
JUN	BDL	BDL	BDL	BDL	.040 <T	BDL
JUL	BDL	BDL	BDL	BDL	.080 <T	BDL
AUG	.060 <T	.100 <T	.170 <T	.100 <T	.100 <T	BDL
SEP	BDL	BDL	BDL	BDL	BDL	BDL
OCT	.030 <T	BDL	.020 <T	.020 <T	BDL	BDL
NOV	BDL	BDL	BDL	BDL	BDL	BDL
DEC	BDL	BDL	BDL	BDL	BDL	BDL
CADMIUM (UG/L)				DET'N LIMIT = 0.050 GUIDELINE = 5.000 (A1)		
JAN	BDL	BDL	BDL	BDL	BDL	BDL
FEB	.060 <T	BDL	.120 <T	BDL	.120 <T	.100 <T
MAR	BDL	BDL	BDL	BDL	1.800	BDL
APR	BDL	BDL	BDL	.100 <T	.120 <T	.090 <T
MAY	.120 <T	.	.	.	BDL	.120 <T
JUN	BDL	BDL	BDL	BDL	.090 <T	.070 <T
JUL	.110 <T	.120 <T	.210 <T	.190 <T	.210 <T	.110 <T
AUG	.080 <T	.060 <T	.080 <T	.070 <T	BDL	BDL

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DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
SEP	BDL	BDL	BDL	BDL	BDL	BDL
OCT	BDL	.060 <T	.060 <T	BDL	.060 <T	BDL
NOV	BDL	BDL	BDL	BDL	BDL	BDL
DEC	BDL	BDL	BDL	BDL	BDL	BDL
COBALT (UG/L)				DET'N LIMIT = 0.020 GUIDELINE = N/A		
JAN	BDL	BDL	BDL	.030 <T	.030 <T	.040 <T
FEB	.100 <T	.090 <T	.050 <T	.080 <T	.100 <T	.050 <T
MAR	BDL	.110 <T	.030 <T	BDL	.070 <T	.050 <T
APR	.130 <T	.130 <T	.110 <T	.070 <T	.180 <T	.090 <T
MAY	.370 <T	.	.	.	.460 <T	.400 <T
JUN	.780 <T	.840 <T	.650 <T	.670 <T	.650 <T	.770 <T
JUL	.050 <T	.070 <T	BDL	.030 <T	.120 <T	.200 <T
AUG	.060 <T	.110 <T	BDL	BDL	BDL	BDL
SEP	.030 <T	BDL	BDL	BDL	BDL	BDL
OCT	.230 <T	.170 <T	.130 <T	.200 <T	.120 <T	.180 <T
NOV	.190 <T	.080 <T	.100 <T	.110 <T	.110 <T	.100 <T
DEC	.040 <T	.030 <T	.090 <T	.110 <T	.110 <T	.130 <T
CHROMIUM (UG/L)				DET'N LIMIT = 0.100 GUIDELINE = 50. (A1)		
JAN	5.500	1.900	5.100	2.600	5.700	1.800
FEB	590.000	8.800	1.700	4.700	6.000	4.900
MAR	120.000	70.000	2.000	3.700	5.300	.730 <T
APR	17.000	9.400	1.600	1.200	6.600	1.800
MAY	.870 <T	.	.	.	1.500	5.200
JUN	3.700	1.100	3.300	3.900	5.600	2.000
JUL	5.700	5.600	6.100	2.700	4.900	2.400
AUG	2.300	4.500	4.800	4.400	5.000	3.000
SEP	1.400	4.600	5.400	3.400	1.800	5.000
OCT	.460 <T	.530 <T	.510 <T	.420 <T	.590 <T	.570 <T
NOV	.230 <T	.330 <T	.290 <T	.320 <T	.200 <T	.280 <T
DEC	BDL	.940 <T	BDL	BDL	BDL	.750 <T
COPPER (UG/L)				DET'N LIMIT = .100 GUIDELINE = 1000 (A3)		
JAN	1.900	1.000 <T	3.100	2.100	230.000	27.000
FEB	2.000	1.200	4.000	2.700	74.000	98.000
MAR	1.700	1.200	4.400	2.800	190.000	18.000
APR	1.900	1.200	26.000	3.600	110.000	13.000
MAY	2.200	.	.	.	160.000	18.000
JUN	2.100	1.500	24.000	3.200	60.000	17.000
JUL	1.800	1.100	21.000	2.900	47.000	16.000
AUG	2.300	.920 <T	17.000	2.900	40.000	8.000
SEP	1.500	.940 <T	12.000	2.900	47.000	11.000
OCT	2.300	1.100	21.000	3.200	90.000	23.000
NOV	1.100	.820 <T	6.100	2.500	95.000	25.000
DEC	1.600 <T	1.200 <T	7.000	2.200 <T	120.000	12.000

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DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
IRON (UG/L)				DET'N LIMIT = 4.000 GUIDELINE = 300. (A3)		
JAN	33.000 <T	13.000 <T	70.000	67.000	23.000 <T	25.000 <T
FEB	51.000	7.400 <T	35.000 <T	30.000 <T	7.900 <T	6.300 <T
MAR	24.000 <T	17.000 <T	51.000	51.000	5.300 <T	12.000 <T
APR	BDL	BDL	11.000 <T	60.000	BDL	BDL
MAY	21.000 <T	.	.	.	15.000 <T	14.000 <T
JUN	30.000 <T	10.000 <T	24.000 <T	41.000 <T	5.900 <T	14.000 <T
JUL	20.000 <T	BDL	14.000 <T	24.000 <T	7.800 <T	11.000 <T
AUG	16.000 <T	BDL	17.000 <T	54.000	BDL	BDL
SEP	14.000 <T	5.800 <T	20.000 <T	66.000	BDL	BDL
OCT	50.000 <T	5.900 <T	30.000 <T	61.000	9.400 <T	15.000 <T
NOV	19.000 <T	BDL	24.000 <T	29.000 <T	BDL	6.700 <T
DEC	63.000	BDL	24.000 <T	42.000 <T	BDL	BDL
MERCURY (UG/L)				DET'N LIMIT = 0.010 GUIDELINE = 1.000 (A1)		
JAN	.040 <T	.040 <T	.	.050 <T	.	.100
FEB	.050 <T	.090	.	.100	.	.100
MAR	.090	.100	.	.050 <T	.	.060
APR	.090	.060	.	.070	.	.050 <T
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	.090	.	BDL
JUL	BDL	BDL	.	.120	.	BDL
AUG	BDL	BDL	.	.110	.	BDL
SEP	BDL	BDL	.	.130	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.020 <T	.	BDL	. .	.020 <T
MANGANESE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 50.0 (A3)		
JAN	1.400	BDL	1.300	1.300	.280 <T	BDL
FEB	4.900	.750	1.300	1.300	.550	.410 <T
MAR	3.300	.720	2.200	2.400	1.300	.790
APR	5.300	.950	2.000	2.700	1.100	.690
MAY	11.000	.	.	.	2.000	1.800
JUN	8.300	1.600	2.900	4.000	2.500	2.200
JUL	4.300	.690	2.700	1.700	1.800	1.700
AUG	5.500	.630	1.800	3.700	1.200	.740
SEP	4.300	.750	2.800	3.900	1.100	1.000
OCT	6.100	.220 <T	1.100	2.600	.670	.660
NOV	3.400	.410 <T	1.400	1.500	1.200	.590
DEC	5.100	.480 <T	1.500	2.000	1.300	.540
MOLYBDENUM (UG/L)				DET'N LIMIT = 0.020 GUIDELINE = N/A		
JAN	1.100	1.200	1.100	1.100	1.200	1.200
FEB	1.500	1.400	1.600	1.600	1.500	1.400
MAR	1.500	1.600	1.500	1.700	1.700	1.700
APR	1.300	1.400	1.400	1.300	1.300	1.400

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DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
MAY	1.800	.	.	.	1.700	1.700
JUN	1.700	1.600	1.700	1.500	1.700	1.700
JUL	1.400	1.500	1.600	1.500	1.500	1.600
AUG	1.300	1.300	1.400	1.400	1.400	1.500
SEP	1.200	1.300	1.200	1.400	1.300	1.500
OCT	1.300	1.300	1.200	1.200	1.200	1.200
NOV	1.200	1.200	1.100	1.200	1.300	1.200
DEC	1.200	1.200	1.400	1.300	1.400	1.400
NICKEL (UG/L)			DET'N LIMIT = 0.100 GUIDELINE = 50. (F3)			
JAN	1.600 <T	.740 <T	.800 <T	.630 <T	1.300 <T	.810 <T
FEB	2.400	1.800 <T	1.700 <T	1.300 <T	1.200 <T	1.400 <T
MAR	.510 <T	.170 <T	.330 <T	.110 <T	.380 <T	.470 <T
APR	1.300 <T	.960 <T	.900 <T	.960 <T	1.100 <T	.670 <T
MAY	1.300 <T	.	.	.	1.000 <T	1.500 <T
JUN	10.000	10.000	12.000	9.900	10.000	10.000
JUL	12.000	11.000	11.000	11.000	13.000	13.000
AUG	.780 <T	.270 <T	BDL	.130 <T	BDL	BDL
SEP	.670 <T	.430 <T	.200 <T	.530 <T	.510 <T	.540 <T
OCT	.990 <T	.790 <T	.930 <T	.980 <T	1.200 <T	1.500 <T
NOV	1.000 <T	.640 <T	.500 <T	.410 <T	.580 <T	.810 <T
DEC	.680 <T	.560 <T	BDL	.820 <T	1.700 <T	1.700 <T
LEAD (UG/L)			DET'N LIMIT = 0.050 GUIDELINE = 50. (A1)			
JAN	.470	.090 <T	.720	.690	3.800	.360
FEB	.540	.300	.810	.800	2.500	2.000
MAR	.620	.370	1.000	1.000	11.000	5.000
APR	.370	.130 <T	1.500	.890	3.700	.440
MAY	.640	.	.	.	5.900	.640
JUN	.330	.160 <T	3.800	2.200	8.500	1.100
JUL	.560	BDL	2.800	2.500	3.500	1.100
AUG	.520	.330	2.800	3.000	3.100	.630
SEP	.390	.130 <T	3.600	4.000	4.000	1.100
OCT	.440	.040 <T	3.000	2.800	3.800	1.200
NOV	.100 <T	BDL	2.200	1.600	3.700	.710
DEC	.600	.200 <T	1.600	1.600	2.000	.470 <T
ANTIMONY (UG/L)			DET'N LIMIT = .050 GUIDELINE = 146. (D4)			
JAN	.490	.500	.520	.500	.570	.520
FEB	.780	.790	.700	.920	.960	.830
MAR	.750	1.000	.810	.820	.750	.780
APR	.700	.690	.670	.690	.880	.750
MAY	.800	.	.	.	1.200	.600
JUN	.980	.860	.950	.830	.950	.910
JUL	.560	.730	.630	.800	.860	1.000
AUG	.720	.840	.740	.690	.750	.690
SEP	.510	.460	.360	.620	.760	.700

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DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
OCT	.620	.470	.600	.550	.620	.550
NOV	.520	.560	.640	.600	.590	.630
DEC	.480 <T	.520	.480 <T	.510	.530	.460 <T
SELENIUM (UG/L)			DET'N LIMIT = 0.200 GUIDELINE = 10. (A1)			
JAN	1.400 <T	1.900 <T	2.800 <T	2.100 <T	2.300 <T	2.500 <T
FEB	2.600 <T	4.000 <T	5.400 <T	3.500 <T	4.900 <T	5.400 <T
MAR	2.800 <T	7.500 <T	4.000 <T	4.900 <T	6.700 <T	5.200 <T
APR	.940 <T	2.100 <T	3.100 <T	4.800 <T	3.600 <T	1.700 <T
MAY	5.900 <T	.	.	.	9.500 <T	9.800 <T
JUN	BDL	2.400 <T	3.100 <T	4.600 <T	7.400	4.700 <T
JUL	BDL	3.000 <T	3.700 <T	2.400 <T	5.900	5.800
AUG	BDL	4.000 <T	4.000 <T	5.200	4.100 <T	3.900 <T
SEP	BDL	1.700 <T	2.600 <T	1.700 <T	1.400 <T	2.500 <T
OCT	BDL	BDL	BDL	BDL	BDL	BDL
NOV	BDL	1.200 <T	1.300 <T	BDL	1.500 <T	BDL
DEC	BDL	BDL	BDL	1.100 <T	BDL	1.400 <T
STRONTIUM (UG/L)			DET'N LIMIT = .050 GUIDELINE = N/A			
JAN	170.000	170.000	170.000	170.000	180.000	180.000
FEB	190.000	190.000	190.000	190.000	180.000	180.000
MAR	180.000	210.000	200.000	200.000	210.000	200.000
APR	170.000	180.000	170.000	170.000	170.000	170.000
MAY	180.000	.	.	.	180.000	180.000
JUN	180.000	180.000	190.000	180.000	190.000	190.000
JUL	180.000	180.000	180.000	180.000	190.000	190.000
AUG	170.000	180.000	180.000	180.000	180.000	180.000
SEP	180.000	180.000	190.000	180.000	190.000	190.000
OCT	190.000	190.000	190.000	190.000	190.000	190.000
NOV	180.000	180.000	170.000	180.000	180.000	180.000
DEC	180.000	190.000	190.000	180.000	180.000	180.000
TITANIUM (UG/L)			DET'N LIMIT = .050 GUIDELINE = N/A			
JAN	4.900	5.300	6.000	6.100	7.200	6.700
FEB	3.200	2.600	2.800	2.600	2.800	2.800
MAR	7.200	7.900	7.600	7.800	8.000	8.300
APR	2.400	2.400	2.000 <T	2.100	2.000 <T	1.900 <T
MAY	3.900	.	.	.	3.100	5.700
JUN	6.500	6.600	4.900	4.800	6.000	7.000
JUL	4.000	4.000	3.100	2.900	3.800	4.200
AUG	5.100	5.900	4.500	4.900	5.500	4.900
SEP	3.800	4.900	3.800	3.500	4.600	5.400
OCT	3.700	3.700	3.300	3.300	4.000	3.900
NOV	3.700	4.000	3.900	3.900	3.900	4.700
DEC	4.200 <T	3.500 <T	3.400 <T	3.100 <T	3.100 <T	3.100 <T
THALLIUM (UG/L)			DET'N LIMIT = .010 GUIDELINE = 13. (D4)			

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JAN	BDL	BDL	BDL	BDL	BDL	BDL
FEB	.020 <T	.020 <T	BDL	BDL	BDL	BDL
MAR	.070 <T	BDL	.020 <T	BDL	.040 <T	BDL
APR	.020 <T	BDL	BDL	BDL	BDL	BDL
MAY	BDL	.	.	.	BDL	.070 <T
JUN	BDL	BDL	BDL	BDL	.020 <T	.020 <T
JUL	.020 <T	BDL	.060 <T	BDL	BDL	BDL
AUG	BDL	BDL	BDL	BDL	BDL	BDL
SEP	.030 <T	.030 <T	.020 <T	.020 <T	BDL	.040 <T
OCT	BDL	BDL	BDL	BDL	BDL	BDL
NOV	BDL	BDL	BDL	BDL	BDL	BDL
DEC	BDL	BDL	BDL	BDL	BDL	BDL
URANIUM (UG/L)				DET'N LIMIT = .020	GUIDELINE = 100.(B1)	
JAN	.350	.330	.350	.340	.320	.360
FEB	.470	.460	.490	.510	.510	.480
MAR	.480	.690	.550	.730	.510	.570
APR	.490	.540	.520	.510	.480	.530
MAY	.500	.	.	.	.470	.620
JUN	.540	.580	.580	.620	.590	.540
JUL	.610	.520	.520	.570	.710	.570
AUG	.430	.450	.460	.440	.390	.470
SEP	.270	.260	.300	.300	.340	.330
OCT	.390	.300	.300	.300	.330	.280
NOV	.330	.380	.320	.300	.350	.330
DEC	.280 <T	.360 <T	.310 <T	.390 <T	.340 <T	.320 <T
VANADIUM (UG/L)				DET'N LIMIT = .050	GUIDELINE = N/A	
JAN	.210 <T	.320 <T	.270 <T	.240 <T	.300 <T	.220 <T
FEB	1.700	.370 <T	.310 <T	.350 <T	.390 <T	.360 <T
MAR	.600	.580	.150 <T	.130 <T	.260 <T	.170 <T
APR	.270 <T	.440 <T	.360 <T	.320 <T	.410 <T	.320 <T
MAY	.210 <T	.	.	.	.320 <T	.420 <T
JUN	.940	1.200	1.200	1.200	1.200	1.200
JUL	.280 <T	.530	.470 <T	.390 <T	.460 <T	.430 <T
AUG	.240 <T	.490 <T	.410 <T	.450 <T	.440 <T	.420 <T
SEP	.250 <T	.420 <T	.400 <T	.410 <T	.550	.470 <T
OCT	.370 <T	.520	.390 <T	.380 <T	.490 <T	.440 <T
NOV	.260 <T	.440 <T	.340 <T	.310 <T	.530	.390 <T
DEC	.330 <T	.300 <T	.190 <T	.190 <T	.280 <T	.340 <T
ZINC (UG/L)				DET'N LIMIT = .001	GUIDELINE = 5000. (A3)	
JAN	1.800	1.100	1.800	1.200	17.000	1.700
FEB	3.200	1.500	2.800	1.800	7.800	7.800
MAR	3.400	2.400	3.500	2.800	18.000	2.900
APR	2.700	2.200	2.900	1.700	12.000	1.900
MAY	4.400	.	.	.	16.000	3.600

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
JUN	2.800	2.700	9.000	2.800	13.000	3.500
JUL	1.700	1.300	3.900	2.300	6.600	2.400
AUG	2.600	2.000	4.600	2.000	10.000	1.900
SEP	1.500	.880 <T	3.600	2.100	12.000	2.200
OCT	3.300	2.300	4.600	3.100	11.000	5.000
NOV	1.300	.770 <T	4.000	1.400	7.200	2.600
DEC	7.200	1.500 <T	2.100	1.600 <T	6.100	2.400

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PESTICIDES & PCB						
ALPHA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 700 (G)	
JAN	2.000 <T	2.000 <T	.	2.000 <T	.	2.000 <T
FEB	BDL	BDL	.	BDL	.	BDL
MAR	2.000 <T	BDL	.	2.000 <T	.	2.000 <T
APR	1.000 <T	2.000 <T	.	1.000 <T	.	2.000 <T
MAY	1.000 <T	.	.	.	.	1.000 <T
JUN	BDL	1.000 <T	.	1.000 <T	.	1.000 <T
JUL	2.000 <T	2.000 <T	.	BDL	.	BDL
AUG	1.000 <T	1.000 <T	.	2.000 <T	.	2.000 <T
SEP	BDL	BDL	.	BDL	.	BDL
OCT	1.000 <T	1.000 <T	.	1.000 <T	.	2.000 <T
NOV	2.000 <T	1.000 <T	.	1.000 <T	.	1.000 <T
DEC	BDL	BDL	.	BDL	.	BDL
BETA BHC (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 300 (G)	
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	1.000 <T	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
LINDANE (NG/L)			DET'N LIMIT = 1.000		GUIDELINE = 4000 (A1)	
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	1.000 <T
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
ATRAZINE (NG/L)			DET'N LIMIT = 50.00		GUIDELINE = 60000 (B3)	
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	BDL
AUG	BDL	BDL	.	.	.	.
SEP	BDL	BDL	.	.	.	.
OCT	130.000 <T	140.000 <T	.	.	.	.
NOV	BDL	BDL	.	.	.	.
DEC	BDL	BDL	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
PHENOLICS (UG/L PHENOLICS)			DET'N LIMIT = 0.2		GUIDELINE = 2.00 (A3)	
JAN	.800	1.200	.	.	.	.
FEB	.800 <T	.600 <T	.	.	.	.
MAR	2.000	1.000	.	.	.	.
APR	1.600	1.200	.	.	.	.
MAY	.600 <T	.	.	.	.	.
JUN	.600 <T	1.000	.	.	.	.
JUL	3.800	4.000	.	.	.	.
AUG	1.400	5.800	.	.	.	.
SEP	.600 <T	1.600	.	.	.	.
OCT	5.600	1.000	.	.	.	.
NOV	1.800	.600 <T	.	.	.	.
DEC	.400 <T	.600 <T	.	.	.	.

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
VOLATILES						
BENZENE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 5.0 (B1)		
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	.050 <T	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	.050 <T
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	.050 <T	.	IU
AUG	.050 <T	IU	.	.050 <T	.	BDL
SEP	BDL	BDL	.	.050 <T	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	.050 <T
TOLUENE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 24.0 (B4)		
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	.100 <T	.	BDL	.	BDL
MAR	BDL	BDL	.	.150 <T	.	BDL
APR	BDL	.100 <T	.	.100 <T	.	.050 <T
MAY	BDL	.	.	.	.	.050 <T
JUN	BDL	BDL	.	.100 <T	.	BDL
JUL	BDL	BDL	.	.100 <T	.	IU
AUG	BDL	IU	.	.100 <T	.	.050 <T
SEP	BDL	.050 <T	.	.250 <T	.	.100 <T
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	.050 <T	.	BDL	.	BDL
DEC	BDL	.050 <T	.	BDL	.	.150 <T
ETHYLBENZENE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 2.4 (B4)		
JAN	BDL	BDL	.	.050 <T	.	BDL
FEB	.050 <T	.050 <T	.	BDL	.	BDL
MAR	.100 <T	BDL	.	.050 <T	.	BDL
APR	BDL	.050 <T	.	.050 <T	.	.050 <T
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	.050 <T	.	BDL
JUL	BDL	BDL	.	BDL	.	IU
AUG	BDL	IU	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.050 <T	.	BDL	.	.050 <T
M-XYLENE (UG/L)				DET'N LIMIT = .100 GUIDELINE = 300 (B4)		
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
APR	BDL	.100 <T	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	IU
AUG	BDL	IU	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.100 <T	.	BDL	.	BDL
O-XYLENE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 300 (B4)		
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	.050 <T	.	.050 <T	.	BDL
MAY	BDL	.	.	.	.	.050 <T
JUN	BDL	BDL	.	.050 <T	.	BDL
JUL	BDL	BDL	.	.050 <T	.	IU
AUG	BDL	IU	.	BDL	.	BDL
SEP	BDL	BDL	.	.100 <T	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	.100 <T	.	BDL	.	.050 <T
STYRENE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 46.5 (D2)		
JAN	BDL	.050 <T	.	.300 <T	.	.050 <T
FEB	.100 <T	.400 <T	.	.100 <T	.	.100 <T
MAR	.750 UCS	.300 <T	.	.300 <T	.	.300 <T
APR	.150 <T	.200 <T	.	.250 <T	.	.200 <T
MAY	BDL	.	.	.	.	.100 <T
JUN	.150 <T	.100 <T	.	.150 <T	.	.100 <T
JUL	.250 <T	.100 <T	.	.100 <T	.	IU
AUG	.050 <T	IU	.	.100 <T	.	.100 <T
SEP	.150 <T	.050 <T	.	BDL	.	.050 <T
OCT	BDL	BDL	.	BDL	.	.050 <T
NOV	BDL	.050 <T	.	BDL	.	BDL
DEC	BDL	BDL	.	.050 <T	.	BDL
CHLOROFORM (UG/L)				DET'N LIMIT = .100 GUIDELINE = 350 (A1+)		
JAN	BDL	6.900	.	7.300	.	6.600
FEB	.200 <T	6.400	.	5.600	.	6.100
MAR	.200 <T	11.500	.	9.800	.	11.500
APR	BDL	10.000	.	10.800	.	9.200
MAY	BDL	.	.	.	.	13.700
JUN	BDL	12.200	.	15.000	.	15.500
JUL	BDL	12.800	.	12.300	.	IU
AUG	BDL	IU	.	14.800	.	18.200

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
SEP	BDL	15.500	.	14.800	.	17.800
OCT	BDL	13.400	.	11.000	.	8.700
NOV	BDL	6.800	.	6.700	.	7.900
DEC	BDL	9.200	.	9.200	.	9.400
111, TRICHLOROETHANE (UG/L)				DET'N LIMIT = .020 GUIDELINE = 200 (D1)		
JAN	BDL	BDL	.	BDL	.	BDL
FEB	.100 <T	.360	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	.020 <T	.	BDL	.	BDL
MAY	.020 <T	.	.	.	.	BDL
JUN	BDL	BDL	.	.020 <T	.	BDL
JUL	BDL	BDL	.	BDL	.	IU
AUG	.020 <T	IU	.	BDL	.	BDL
SEP	BDL	BDL	.	.020 <T	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	.060 <T
DICHLOROBROMOMETHANE (UG/L)				DET'N LIMIT = .050 GUIDELINE = 350 (A1+)		
JAN	BDL	7.450	.	7.150	.	6.750
FEB	.150 <T	6.350	.	5.850	.	6.950
MAR	.100 <T	10.000	.	8.350	.	9.800
APR	BDL	7.800	.	7.600	.	7.100
MAY	BDL	.	.	.	.	9.300
JUN	BDL	8.450	.	9.400	.	10.000
JUL	BDL	9.250	.	8.650	.	IU
AUG	BDL	IU	.	8.950	.	10.250
SEP	BDL	9.500	.	8.700	.	10.550
OCT	BDL	10.150	.	8.800	.	7.500
NOV	BDL	6.950	.	6.300	.	8.100
DEC	BDL	7.400	.	7.800	.	8.150
CHLORODIBROMOMETHANE (UG/L)				DET'N LIMIT = .100 GUIDELINE = 350 (A1+)		
JAN	BDL	4.400	.	4.100	.	3.900
FEB	BDL	3.400	.	3.400	.	3.800
MAR	BDL	4.800	.	4.500	.	4.600
APR	BDL	4.000	.	3.800	.	3.900
MAY	BDL	.	.	.	.	4.500
JUN	BDL	4.600	.	5.100	.	5.400
JUL	BDL	4.600	.	4.600	.	IU
AUG	BDL	IU	.	4.400	.	5.100
SEP	BDL	5.000	.	4.900	.	5.700
OCT	BDL	5.000	.	4.700	.	4.000
NOV	BDL	4.400	.	4.100	.	4.600
DEC	BDL	4.600	.	4.200	.	3.100

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
T-CHLOROETHYLENE (UG/L)				DET'N LIMIT = .050	GUIDELINE = 10.0 (C2)	
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	.050 <T	.	IU
AUG	BDL	IU	.	BDL	.	.050 <T
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	BDL
BROMOFORM (UG/L)				DET'N LIMIT = .200	GUIDELINE = 350 (A1+)	
JAN	BDL	.600 <T	.	.600 <T	.	.600 <T
FEB	BDL	.400 <T	.	.400 <T	.	.600 <T
MAR	BDL	.600 <T	.	.600 <T	.	.600 <T
APR	BDL	.400 <T	.	.400 <T	.	.400 <T
MAY	BDL	.	.	.	.	.600 <T
JUN	BDL	.600 <T	.	.600 <T	.	.600 <T
JUL	BDL	.600 <T	.	.600 <T	.	IU
AUG	BDL	IU	.	.600 <T	.	.400 <T
SEP	BDL	.600 <T	.	.600 <T	.	.800 <T
OCT	BDL	.600 <T	.	.600 <T	.	.400 <T
NOV	BDL	.600 <T	.	.600 <T	.	.600 <T
DEC	BDL	.600 <T	.	.800 <T	.	.600 <T
1,3 DICHLOROBENZENE (UG/L)				DET'N LIMIT = .100	GUIDELINE = 130 (G)	
JAN	BDL	BDL	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL	.	BDL
MAR	BDL	BDL	.	BDL	.	BDL
APR	BDL	BDL	.	BDL	.	BDL
MAY	BDL	.	.	.	.	BDL
JUN	BDL	BDL	.	BDL	.	BDL
JUL	BDL	BDL	.	BDL	.	IU
AUG	BDL	IU	.	BDL	.	BDL
SEP	BDL	BDL	.	BDL	.	BDL
OCT	BDL	BDL	.	BDL	.	BDL
NOV	BDL	BDL	.	BDL	.	BDL
DEC	BDL	BDL	.	BDL	.	.100 <T
TOTL TRIHALOMETHANES (UG/L)				DET'N LIMIT = .500	GUIDELINE = 350 (A1)	
JAN	BDL	19.350	.	19.150	.	17.850
FEB	BDL	16.550	.	15.250	.	17.450
MAR	BDL	26.900	.	23.250	.	26.500
APR	BDL	22.200	.	21.600	.	20.600

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM HAMILTON WSS 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW	TREATED	SITE 1		SITE 2	
			STANDING	FREE FLOW	STANDING	FREE FLOW
MAY	BDL	.	.	.	.	28.100
JUN	BDL	25.850	.	30.100	.	31.500
JUL	BDL	27.250	.	26.150	.	IU
AUG	BDL	IU	.	28.750	.	33.950
SEP	BDL	30.600	.	29.000	.	34.850
OCT	BDL	29.150	.	25.100	.	20.600
NOV	BDL	18.750	.	17.700	.	21.200
DEC	BDL	21.800	.	21.950	.	21.250

TRACE LEVELS OF TOLUENE ARE LABORATORY ARTIFACTS DERIVED FROM THE ANALYTICAL METHODOLOGY.

TRACE LEVELS OF STYRENE ARE CONSIDERED TO BE LABORATORY ARTIFACTS RESULTING FROM THE LABORATORY SHIPPING CONTAINERS.

Table 6

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
FECAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	0 (A1)
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML(A1)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,A-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	2000. (B4)
PENTACHLOROPHENOL	NG/L	50.	30000. (B4)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	^{o}C	N/A	<15 ^{o}C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMSNLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
SULPHATE	MG/L	.200	500. (A3)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)
METALS			
ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	10. (F3)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)
PHENOLICS			
PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
PESTICIDES & PCB			
ALDRIN	NG/L	1.0	700. (A1)
AMETRINE	NG/L	50.	300000. (D3)
ATRAZINE	NG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE(LINDANE)	NG/L	1.0	4000. (A1)
ALPHA CHLORDANE	NG/L	2.0	7000. (A1)
GAMMA CHLORDANE	NG/L	2.0	7000. (A1)
BLADEX	NG/L	100.	10000. (B3)
DIELDRIN	NG/L	2.0	700. (A1)
METHOXYCHLOR	NG/L	5.0	900000. (B1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000. (D4)
ENDRIN	NG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE(THIODAN SULPHATE)	NG/L	4.0	N/A

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
HEPTACHLOR EPOXIDE	NG/L	1.0	3000.	(A1)
HEPTACHLOR	NG/L	1.0	3000.	(A1)
METOLACHLOR	NG/L	500.	50000.	(B3)
MIREX	NG/L	5.0	N/A	
OXYCHLORDANE	NG/L	2.0	N/A	
O,P-DDT	NG/L	5.0	30000.	(A1)
PCB	NG/L	20.0	3000.	(A2)
O,P-DDD	NG/L	5.0	N/A	
PPDDE	NG/L	1.0	30000.	(A1)
PPDDT	NG/L	5.0	30000.	(A1)
ATRATONE	NG/L	50.	N/A	
ALACHLOR	NG/L	500.	35000.	(D2)
PROMETONE	NG/L	50.	52500.	(D3)
PROPAZINE	NG/L	50.	16000.	(D2)
PROMETRYNE	NG/L	50.	1000.	(B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000.	(B2)
SIMAZINE	NG/L	50.	10000.	(B3)
POLYAROMATIC HYDROCARBONS				
PHENANTHRENE	NG/L	10.0	N/A	
ANTHRACENE	NG/L	1.0	N/A	
FLUORANTHENE	NG/L	20.0	42000.	(D4)
PYRENE	NG/L	20.0	N/A	
BENZO(A)ANTHRACENE	NG/L	20.0	N/A	
CHRYSENE	NG/L	50.0	N/A	
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A	
BENZO(E)PYRENE	NG/L	50.0	N/A	
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A	
PERYLENE	NG/L	10.0	N/A	
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A	
BENZO(A)PYRENE	NG/L	5.0	10.	(B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A	
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A	
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A	
BENZO(B)CHRYSENE	NG/L	2.0	N/A	
CORONENE	NG/L	10.0	N/A	
SPECIFIC PESTICIDES				
TOXAPHENE	NG/L	N/A	5000.	(A1)
2,4,5-TRICHLOROBUTYRIC ACID (2,4,5-T)	NG/L	50.	200000.	(B4)
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000.	(A1)
2,4-DICHLORORPHENOXYBUTYRIC ACID	NG/L	200.	18000.	(B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A	
DICAMBA	NG/L	100.	120000.	(B1)
PICLORAM	NG/L	100.	190000.	(B3)
SILVEX (2,4,5-TP)	NG/L	50.	10000.	(A1)
DIAZINON	NG/L	20.	20000.	(B1)
DICHLOROVOS	NG/L	20.	N/A	
DURSBAN	NG/L	20.	N/A	
ETHION	NG/L	20.	35000.	(G)
GUTHION(AZINPHOSMETHYL)	NG/L	N/A	20000.	(B1)
MALATHION	NG/L	20.	190000.	(B1)
MEVINPHOS	NG/L	20.	N/A	
METHYL PARATHION	NG/L	50.	7000.	(A1)
METHYLTRITHION	NG/L	20.	N/A	

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
PARATHION	NG/L	20.	50000. (B1)
PHORATE (THIMET)	NG/L	20.	2000. (B3)
RELDAN	NG/L	20.	N/A
RONNEL	NG/L	20.	N/A
AMINOCARB	NG/L	N/A	N/A
BENONYL	NG/L	N/A	N/A
BUX (METALKAMATE)	NG/L	2000.	N/A
CARBOFURAN	NG/L	2000.	90000. (B1)
CICP (CHLORPROPHAM)	NG/L	2000.	350000. (G)
DIALLATE	NG/L	2000.	30000. (H)
EPTAM	NG/L	2000.	N/A
IPC	NG/L	2000.	N/A
PROPOXUR (BAYGON)	NG/L	2000.	90000. (G)
SEVIN (CARBARYL)	NG/L	200.	90000. (B1)
SUTAN (BUTYLATE)	NG/L	2000.	245000. (D3)
VOLATILES			
BENZENE	UG/L	.050	5.0 (B1)
TOLUENE	UG/L	.050	24.0 (B4)
ETHYLBENZENE	UG/L	.050	2.4 (B4)
PARA-XYLENE	UG/L	.100	300. (B4)
META-XYLENE	UG/L	.100	300. (B4)
ORTHO-XYLENE	UG/L	.050	300. (B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0 (D1)
ETHLYENE DIBROMIDE	UG/L	.05	.05 G)
METHYLENE CHLORIDE	UG/L	.500	50. (B1)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	70. (D5)
1,1-DICHLOROETHANE	UG/L	.100	N/A
CHLOROFORM	UG/L	.100	350. (A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200. (D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0 (D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0 (B1)
1,2-DICHLOROPROPANE	UG/L	.050	6.0 (D5)
TRICHLOROETHYLENE	UG/L	.100	50. (B1)
DICHLOROBROMOMETHANE	UG/L	.050	350. (A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60(D4)
CHLORODIBROMOMETHANE	UG/L	.100	350. (A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0 (C2)
BROMOFORM	UG/L	.200	350. (A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17(D4)
CHLOROBENZENE	UG/L	.100	60. (D5)
1,4-DICHLOROBENZENE	UG/L	.100	1.0 (B4)
1,3-DICHLOROBENZENE	UG/L	.100	130. (G)
1,2-DICHLOROBENZENE	UG/L	.050	3.0 (B4)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A
TOTAL TRIHALOMETHANES	UG/L	.500	350. (A1)
STYRENE	UG/L	.05	140. (D5)